

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

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CIVIL ENGINEERING DEPARTMENT

ACADEMIC YEAR 2017-2018

SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

SUBJECT: HARBOUR & AIRPORT ENGINEERING (2180602)

SEMESTER VIII

ASSIGNMENTS



CIVIL ENGINEERING DEPARTMENT

ACADEMIC YEAR 2017-2018

Silver Oak College of Engineering & Technology

Civil Engineering Department

Branch: Civil

Semester: VIII

Subject Name: Harbour & Airport Engineering

Subject Code: 2180602

HARBOUR ENGINEERING

Assignment No. 1 – General

1. State the advantages and disadvantages of water transportation.
2. Write short notes on Indian Ports Association.
3. Give the classification of harbour in brief.

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Lect. Reecha Panchal & Lect. Anuj Bhatt
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Assignment No. 2 – HARBOUR PLANNING

1. What are the requirements of a good harbour?.
2. What are the principles of harbour planning?
3. Explain harbour site investigation and site analysis.
4. Explain the surveys to be carried out for harbour planning.
5. Define the terms (i) Port (ii) Plimsoll Mark (iii) Beam (iv) Draft (v) Hull

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Assignment No. 3 – NATURAL PHENOMENA

1. How tides are formed and what is tidal range?
2. How the currents are generated? Enlist the types of currents and explain littoral drift.
3. Explain the characteristics of waves and its effects on marine structures.

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Assignment No. 4: MARINE STRUCTURES

1. Define breakwater and explain the classification of breakwaters in broad sense.
2. Write short notes on (i) Pier (ii) Wharves (iii) Jetty (iv) Dolphin (v) Fenders
3. Explain the types of mooring accessories.

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Assignment No. 5: DOCKS AND LOCKS

1. Define dock and state the classification of dock.
2. What is the purpose of wet dock and give the design considerations for the same.
3. Explain dry dock and floating dock.
4. Enlist the types of lock gates and explain operation of lock gates.

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Subject Name: Harbour & Airport Engineering

Subject Code: 2180602

Assignment No. 6: PORT AMENITIES

1. What is ferry? Describe different types of ferries.

2. Write short notes on
 - I. Ware house
 - II. Apron
 - III. Transfer bridge
 - IV. Floating landing stage

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Assignment No. 7: NAVIGATIONAL AIDS

1. Why navigational aids are provided and which types of navigational aids are provided?
2. Explain function of following
 - I. Lightship
 - II. Beacons
 - III. LORAN and RADAR
 - IV. Mooring buoy
 - V. Lighthouse

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Subject Name: Harbour & Airport Engineering

Subject Code: 2180602

Assignment No. 8: Harbour Maintenance

1. What is dredging? Classify the different types of dredging works. List the different types of dredgers.
2. Write short notes on
 - (i) Bulkheads
 - (ii) Groynes
 - (iii) Revetments
3. Write short note on disposal of dredging material.
4. Explain the causes of Beach Erosion.


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AIRPORT ENGINEERING

Assignment 1: Airport General

1. Give classification of airports as per ICAO.
2. Explain component parts of airplane.
3. Enlist aircrafts characteristics.
4. How minimum turning radius of aircraft is determined?

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Semester: VIII

Subject Name: Harbour & Airport Engineering

Subject Code: 2180602

Assignment 2: Airport Planning

1. Enlist the recommendations for airport master plan preparation given by ICAO & FAA.
2. Explain the factors taken into consideration during site selection for airport.
3. Explain the types of imaginary surfaces. What is approach zone?
4. Explain the zoning laws for airport planning.
5. What are the requirements for an ideal airport layout?

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Subject Name: Harbour & Airport Engineering

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Assignment 3: Runway Design

1. What is runway orientation? Enlist the factors considered for runway orientation.
2. What is wind rose diagram? Explain its types.
3. Enlist the elements of runway

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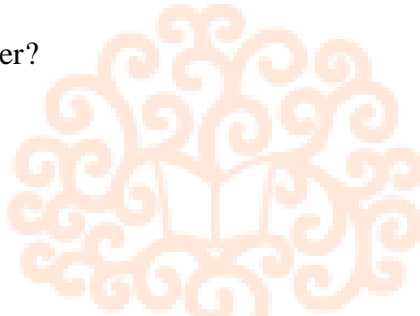
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Subject Name: Harbour & Airport Engineering

Subject Code:2180602

Assignment 4: Taxiway Design

1. What is the function of taxiway in airports?
2. Enlist the factors controlling taxiway layout.
3. What is function of aprons in airports?
4. What is the function of hanger?



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Semester: VIII

Subject Name: Harbour & Airport Engineering

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Assignment 5: Terminal Area Design

1. What do you understand by terminal building? What are the facilities provided in the terminal building?
2. Explain the space requirements for terminal building.
3. Explain vehicular circulation and parking area.

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Semester: VIII

Subject Name: Harbour & Airport Engineering

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Assignment 6: Grading & Drainage

1. Explain significance of airport drainage.
2. State the functions and special characteristics of airport drainage
3. What is meant by Ponding?

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Semester: VIII

Subject Name: Harbour & Airport Engineering

Subject Code:2180602

Assignment 7: Air Traffic control & Visual Aids

1. Explain runway marking for the assistance of pilot to guide the aircraft on runway.
2. Explain VFR and IFR
3. What are enroute aids and landing aids?
4. Give the classification of visual aids.
5. Explain Instrument Landing System.

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SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

SUBJECT: FOUNDATION ENGINEERING (2180609)

SEMESTER VIII

ASSIGNMENTS



CIVIL ENGINEERING DEPARTMENT

ACADEMIC YEAR 2017-2018

Assignment No. 1 –Selection of Foundation & Sub-Soil Exploration

1. Give steps in choosing type of foundation.
2. What are different factors to be considered while selecting type of foundation?
3. What methods are available for sub-surface exploration? Explain any one in detail.
4. Differentiate between strip footing and strap footing.
5. Find a report on soil investigation for a structure and attach in your file.

Activity/Task 1: Discuss soil conditions and details of type of foundation work going around your house along with photographs

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Assignment No. 2 –Shallow Foundation

1. Describe Terzaghi's theory of bearing capacity of foundation soil under strip footing. What are the assumptions and its limitations?
2. Explain "Types of shear failure of soil" with neat sketches.
3. Describe plate load test with neat sketches.
4. Differentiate between General shear failure and Local shear failure.
5. Explain clearly the effect of ground water table on safe bearing capacity of soil.
6. Define contact pressure. Which factors affect contact pressure distribution? Draw contact pressure diagram for rigid footing on clay and sand.
7. Compute the safe bearing capacity of square footing 1.5m x1.5m located at a depth of 1m below ground level in a soil density 18KN/m^3 , $\phi=30^\circ$ ($N_c=30.14$, $N_q=18.4$, $N_\gamma=22.4$). If the water table rises to ground level, what is reduction in SBC? Take $FS=3$.
8. A footing 3m square carries a gross pressure of 350 KN/m^2 at a depth 1.2m in sand. A saturated unit weight of sand is 20KN/m^3 and the unit weight above the water table is 17KN/m^3 . The shear strength parameters are $c=0$ and $\phi=30^\circ$. (For $\phi=30^\circ$, $N_q=20$, $N_\gamma=20$). Determine the factor of safety with respect to shear failure for the following cases:
 - Water table is 5m below ground level
 - Water table is 1.2m below ground level
9. A strip footing of 2 m width is placed at a depth of 4 m below the ground surface. Determine the net ultimate bearing capacity using, 1) Terzaghi's equation, 2) Skempton's equation and 3) IS code. The unit weight of soil (clay) is 20 kN/m^3 and cohesion $c = 10\text{ kN/m}^2$.

Activity/Task 2: Search case study related to shear failure on internet and prepare presentation

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Assignment No. 3 –Pile Foundation

1. Discuss various dynamic formulae. What are their limitations?
2. What is negative skin friction? What is its effect on the pile?
3. Write a short note on group action and efficiency of pile group.
4. Explain “pile load test” to determine the bearing resistance of pile.

A square pile (3x3=9 piles) are embedded in clayey bed ($c_u=100$ KPa). The c/c spacing is

5. kept as 3d. The length and diameter of pile are 10m and 0.3m respectively. If $\alpha=0.6$, calculate the pile group capacity considering it as friction pile group.

A 30cm diameter pile, 15 m long is driven in a deposit of medium dense sand ($\phi=36^\circ$,

6. $N_\gamma=40$ $N_q=42$). The unit weight of sand is 15 KN/m^3 . What is allowable load with factor of safety 3.0. Assume lateral earth pressure coefficient =0.6.

Activity/Task 3: Collect all details of structures of Ahmedabad where pile foundation is used.

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Assignment No. 4 – Foundation on Problematic soil & Introduction to Geosynthetics

1. Define (i) Free swell index (ii) Swelling potential (iii) Swelling pressure.
What are the characteristics of an expansive soil and how it affects the design of Civil
2. Engineering Structure?
3. Explain measures for treatment of expansive soils.
4. Give characteristics of collapsible soils.
What are Geosynthetics? How Geosynthetics useful in constructions of different
5. structures?
6. Write short note on geotextiles.

Activity/Task 4: Review at least three research papers on Geosynthetics used for soil stabilization

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Semester: VIII

Subject Name: Foundation Engineering

Subject Code:2180609

Assignment No. 5 – Retaining Walls

1. Explain types of retaining walls with neat sketches.
2. Discuss stability of cantilever retaining wall.
3. What is sheet pile? Where it is used? Describe types of sheet pile walls.

Activity/Task 5: Collect Satellite Images of River Sabarmati before and after construction of river front.

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SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

SUBJECT: DESIGN OF STEEL STRUCTURES (2180610)

SEMESTER VIII

ASSIGNMENTS



CIVIL ENGINEERING DEPARTMENT

ACADEMIC YEAR 2017-2018

Silver Oak College of Engineering & Technology

Civil Engineering Department

Branch: Civil

Semester: VIII

Subject Name: Design of Steel Structures

Subject Code:2180610

Assignment No. 1 – LOAD COMBINATIONS AND CONNECTIONS

- 1) Explain Appraisal of loading standards of I.S, I.R.C.
- 2) Explain Effect of wind and earthquake on structure.
- 3) Explain Stiffened and unstiffened, moment
- 4) Write a note on shear resisting structural connections
- 5) Explain design and detailing of various connection
 - roof truss to column,
 - column to beam,
 - beam to beam
 - Truss to bed block.

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Civil Engineering Department

Branch: Civil

Semester: VIII

Subject Name: Design of Steel Structures

Subject Code: 2180610

Assignment No. 2 – DESIGN OF INDUSTRIAL BUILDING

- 1) Design a steel roof truss for the following data: Location: Ahmadabad, Span = 15 m, spacing of roof truss = 4 m , pitch = 1/4, Fix configuration of truss, compute D.L , L.L and W.L at nodal points, Design purlin, design principal rafter, design main tie. Assume suitable data. Use both analytical and graphical method.
- 2) Roofing system of an industrial shed consists of trusses spaced at 5 m apart. The span of roof truss is 20 m and rise is 4 m. The level of eaves is 6.5 m above the ground. Assume suitable configuration of truss. Design one inclined member of principle rafter only. Choose suitable section for the inclined member no need to show any check. The shed is situated on flat terrain with sparsely populated buildings. The shed has less than 20% permeability
- 3) Design a continuous angle purlin having 4m span, carrying a load of 4 kN/m and continuous over four supports. Angle of roof is 23° , $f_y = 250$ MPa.
- 4) Explain Major Components of Industrial Building with Neat Sketch
- 5) Distinguish Between Angle Purlin and Tubular Purlin
- 6) Explain Design Steps of Angle Purlin

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Branch: Civil

Semester: VIII

Subject Name: Design of Steel Structures

Subject Code:2180610

Assignment No. 3 – DESIGN OF PLATE GIRDERS

- 1) What are plate girders? Write their application, advantages and disadvantages.
- 2) Explain Elements of Plate Girder
- 3) Explain Simple Post Critical Method and Tension Field Method
- 4) A simply supported welded plate girder of span 27m is subjected to service load of 20kN/m UDL and two fixed point loads of 200 kN each spaced at 9m from each supports. Design the plate girder cross section using the Fy 250 steel plates. Also design load bearing stiffeners. Perform all required checks for cross section as per IS code provisions.
- 5) Redesign the plate Girder in Example 4 above with intermediate Stiffeners and not using tension field action
- 6) A simply supported welded plate girder of span 25m is subjected to service load of 60kN/m UDL and two fixed point loads of 250 kN each spaced at 8.5m from each supports. Design the plate girder cross section. Provide all required checks for cross section as per IS code provision. Apply curtailment of flanges.
- 7) Design a bolted plate girder for effective span of 24 m to carry two concentrated loads 150 kN each at 6m from ends with udl of 32 kN/m. design the girder with intermediate stiffeners. Use steel $f_y = 250 \text{ N/mm}^2$. The girder is laterally supported.

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Semester: VIII

Subject Name: Design of Steel Structures

Subject Code:2180610

Assignment No. 4 – DESIGN OF FOOT OVER BRIDGE

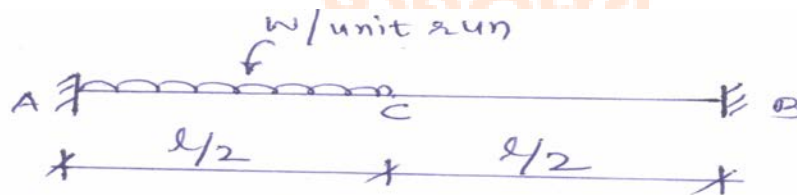
- 1) Design a steel foot over bridge for the following data: span of bridge 30 m, width of walkway = 4m, Flooring = R.C.C slab 110 mm thick, Live load = 5 kN/m², Floor finish = 0.75 kN/m², Use N-type lattice girder, assume suitable data.
- 2) A foot over bridge is of span 24 m and pedestrian load of 5 kN/m². The clear distance between two trusses is 3.5 m and truss height is 2.2 m. Take dead weight of truss is 1.5 kN/m. Assume suitable configurations of truss and design & detail a cross beam and a top chord near centre
- 3) Design a cross beam of steel foot over bridge of Warren type of span of 16 m of having a panel length of 4m, subjected to live load of 5 kN/m². Width of walk way is 5m. Use ISMB section only. Assume self weight of girder is as 0.5 kN/m. Thickness of slab as 120 mm, with LL is of 5kN/m² and FF is 1.0 kN/m². Angle between cross chord and bottom chord is 60°. Use $f_y = 250$ MPa
- 4) Design top chord member only of above stated FOB. Assume self weight of truss is as 1.0 kN/m. Use single unequal angle section only. Assume top chord is supported at all levels. Use $f_y = 250$ MPa
- 5) A through type foot over truss bridge of span 30 m and width 3m carries a live load of 5 kN/m². Assume suitable configuration of bridge and design One member of bottom chord
- 6) Explain Components of Truss Girder Bridges
- 7) Explain Types Of Truss Girders

A/Prof. Parth Danani
Subject Co-ordinator

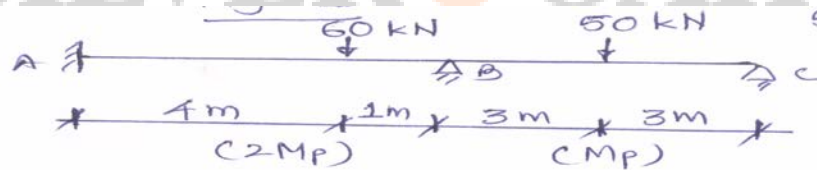
A/Prof. Hasumati B Patel & A/Prof. Ajit Dixit
Subject Partner

Assignment No. 5 – PLASTIC DESIGN

- 1) Explain Assumptions made in plastic method.
- 2) Derive Shape Factors for
 - Rectangular Section
 - Triangular Section
 - Circular Section
- 3) Using static method find the collapse load for Fig.



- 4) Find the plastic moment capacity for Fig



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Branch: Civil

Semester: VIII

Subject Name: Design of Steel Structures

Subject Code: 2180610

ACTIVITES

1. Carry out full design of Industrial structure/ plate girder/ foot-over bridge and prepare design report & detailed drawings in A2 size drawing sheet
Solve at least five design examples from remaining topics (not covered in full design) and
2. draw sketches of various structural components with proper detailing in sketch book/A3 size sheet
- 3.. Development of spread sheets for design of various structural components of steel structure
4. Site visit related to construction stages and report preparation
5. Failure study : during and/or after construction
6. Prepare model of any one steel structure of the syllabus

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SILVER OAK COLLEGE OF ENGINEERING & TECHNOLOGY

SUBJECT: CONSTRUCTION MANAGEMENT (2180611)

SEMESTER VIII

ASSIGNMENTS



CIVIL ENGINEERING DEPARTMENT

ACADEMIC YEAR 2017-2018

Silver Oak College of Engineering & Technology

Civil Engineering Department

Branch: Civil

Semester: VIII

Subject Name: Construction Management

Subject Code:2180611

Assignment No. 1 –Introduction to Construction Project

- 1) Define 'Project and 'Project Management'.
- 2) Explain different phases of a project specifying the activities to be carried out in each phase.
- 3) Who are the major participants/stakeholders involved in a construction project?
- 4) Explain the functions of construction management.
- 5) Explain: Work breakdown structure of various projects and explain factors considered.
- 6) Prepare a neat work breakdown structure for industrial building.
- 7) Find out the contribution of construction activities in the GDP of India.

Activity/Task 1: Attach a Case Study of any undergoing Construction Project in Ahmedabad

A/Prof. Aakash B Desai
Subject Co-ordinator

Lect. Madhav Bhatt
Subject Partner

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Civil Engineering Department

Branch: Civil

Semester: VIII

Subject Name: Construction Management

Subject Code:2180611

Assignment No. 2 –Project Organization

- 1) Discuss different forms of business organization firms.
- 2) Comment on the joint venture form of business in brief. What are the merits & demerits of such form?
- 3) Differentiate between centralized and decentralized forms of Construction Company.
- 4) What are the important factors for choosing a particular project management authority structure?
- 5) Discuss different hierarchies of management level.
- 6) Explain different functions and skills required of a project coordinator.
- 7) Discuss important traits of a project coordinator.
- 8) What are the essential ethical conducts expected from project manager?

Activity/Task 2: Prepare an A4 Chart showing hierarchies of different management levels in Silver Oak College.

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Lect. Madhav Bhatt
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Civil Engineering Department

Branch: Civil

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Subject Name: Construction Management

Subject Code:2180611

Assignment No. 3 – Construction Economics

- 1) Explain economic decision making before finalizing any project. List down all methods of economic decision making and write a note on 'Payback Period'.
- 2) Write a note on 'Time Value of Money'.
- 3) Explain Cash Flow Diagram and give example with a neat sketch.
- 4) What are the factors affecting Project Cash Flow.?
- 5) List down eight formulations for Interest Computation.
- 6) How are different alternatives evaluated by equivalence? Explain Present worth comparison and Future worth comparison method.
- 7) Discuss Benefit-Cost ratio method of evaluation for public projects.
- 8) A government is planning for a hydroelectric project that will also provide flood control, irrigation and recreation benefits. The established benefits and costs of three alternatives are given below. The interest rate to be used for analysis is 5 % and the life of each alternative is to be assumed as 50 years. Evaluate and choose the best alternative out of three.

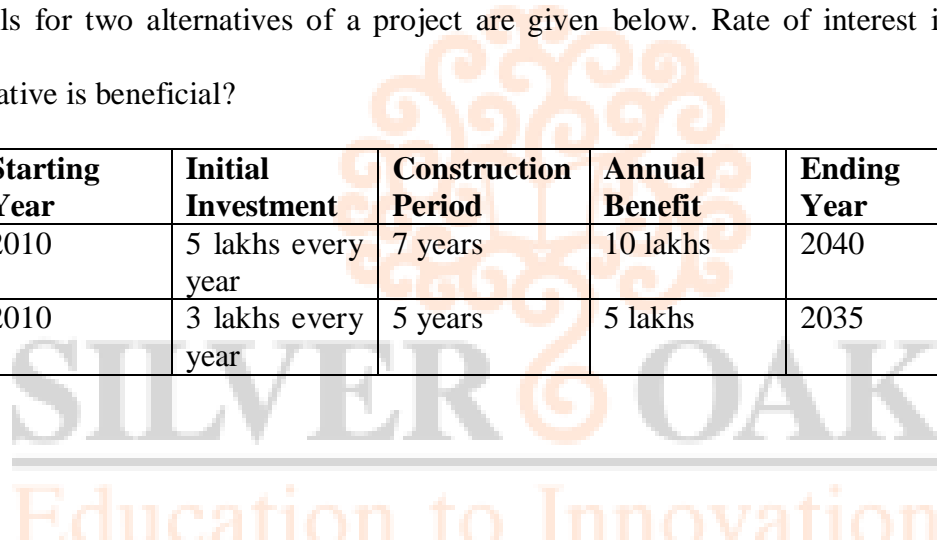
Description	Alternative X	Alternative Y	Alternative Z
Initial Cost	25 crore	35 crore	50 crore
Annual Power Sales	1 crore	1.2 crore	1.8 crore
Annual Flood Control	25 lakhs	35 lakhs	50 lakhs
Annual irrigation benefit	35 lakhs	45 lakhs	60 lakhs
Annual recreation benefit	10 lakhs	20 lakhs	35 lakhs
Annual Operation & Maintenance	20 lakhs	25 lakhs	35 lakhs

9) Solve the problem using i) present worth method, ii) annual worth method and iii) internal rate of return method for given cash flow data. Check your result with incremental rate of return method. The minimum attractive rate of return is 10%.

End of Year →	0	1	2	3	4
Project A	-50,000	5,000	17,500	30,000	42,500
Project B	-50,000	40,000	15,000	15,000	15,000

10) Details for two alternatives of a project are given below. Rate of interest is 8 %. Which alternative is beneficial?

Starting Year	Initial Investment	Construction Period	Annual Benefit	Ending Year
2010	5 lakhs every year	7 years	10 lakhs	2040
2010	3 lakhs every year	5 years	5 lakhs	2035



Activity/Task 3: Investigate whether Ahmedabad Metro Project is viable/feasible considering B/C Ratio Method

A/Prof. Aakash B Desai
Subject Co-ordinator

Lect. Madhav Bhatt
Subject Partner

Assignment No. 4: Construction Planning, Scheduling & Resource Levelling

- 1) What is Gantt bar chart? Explain giving suitable example preparing a bar chart. Enlist drawbacks or short comings of bar charts?
- 2) What is meant by milestone chart? How does it differ from bar chart?
- 3) Explain Line of Balance Technique (LOB). Enumerate the steps taken in scheduling with LOB and how is it advantageous in construction field?
- 4) A project consists of 8 activities A,B,C,D,E,F,G and H with their time of completion as follows:

Activities	Duration (weeks)
A	3
B	5
C	3
D	5
E	7
F	5
G	6
H	5

The precedence relationship are as follows:

- **A&B** are performed parallel, **C** and **D** cannot start until **A** is completed, **E** cannot start until half of the work of activity **C** is complete. **F** can start only after activity **D** is complete. **G** succeeds **C**. **H** is the last activity which should succeed **E**.
 - Draw the bar chart and give your comments & conclusion.
- 5) What is network analysis? When it is used? What is meant by phrase 'Critical Path'?
 - 6) Compare and Contrast CPM and PERT. Under what circumstance would you use PERT as opposed to CPM in construction management?

- 7) Write short note on the following:
- i) Network rules/logic
 - ii) Fulkerson's rule for numbering events
 - iii) Scheduling
- 8) Differentiate between AOA and AON system.
- 9) What do you understand by dummy activity? What are its uses?
- 10) Define: Head Event, Tail Event, Dual Role Events, Burst and Merge Events, Successor Events
- 11) Define: EST, EFT, LST, LFT
- 12) What do you understand by floats? Differentiate clearly between 'total float, free float and independent float'?
- 13) Define: Optimistic time, Pessimistic time and most likely time.
- 14) Explain Earliest expected time, Latest allowable occurrence time and Slack
- 15) What do you understand by 'Cost Slop'? How do you determine it?
- 16) Draw a typical cost-duration curve, show 'optimum duration time & minimum project cost.
- 17) Explain why time cost trade-off is necessary? Discuss various ways to reduce the activity duration.
- 18) What is meant by Time-grid diagram? Describe Time-grid diagram method.
- 19) What is meant by resource scheduling and resource levelling?
- 20) What are the objectives of resource allocation? Explain what do you mean by resource levelling? Explain step by step process for resource levelling.

21) Draw the network of a project having eight activities. Activities predecessor relationships are as follows:

Activity	Immediate Predecessor
B,C,D	A
E	B
F	C
G	D
H	E,F,G

22) The data for the project is given below. Prepare the network diagram with estimated durations of various activities. Determine: T_E , T_L , EFT, EST, LST, LFT, Total Float, Free Float and Independent Float of each activity. Identify Critical Path for the work.

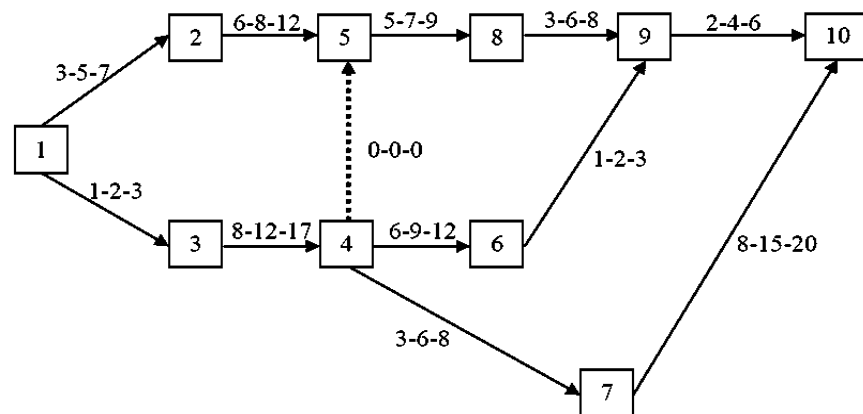
Activity	Activity Arrow $i-j$	Duration T^{i-j}	Activities Immediately	
			Preceed	Follow
A	1-2	6	-	D,E
B	1-3	7	-	F,G
C	1-4	8	-	H
D	2-5	7	A	I,J
E	2-7	8	A	L
F	3-4	4	B	H
G	3-6	4	B	K
H	4-5	9	C,F	I,J
I	5-6	5	D,H	K
J	5-7	6	D,H	L
K	6-7	6	G,I	L
L	7-8	9	E,J,K	-

23) From data given, prepare the network diagram; determine activity times, floats and critical path.

Activity	Activity Arrow <i>i-j</i>	Duration $T^{i,j}$	Activities Immediately	
			Preceed	Follow
A	1-2	3	-	E
B	1-3	4	-	D,F,G
C	1-4	14	-	H
D	3-4	5	B	H
E	2-6	5	A	-
F	3-6	6	B	-
G	3-5	4	B	I
H	4-5	1	C,D	I
I	5-6	1	G,H	-

24) For the network below, determine the critical path and probability of finishing the project within the scheduled time of i) $T_s = 36.67$ days and ii) $T_s = 36$ days. Also calculate the earliest and latest event occurrence time.

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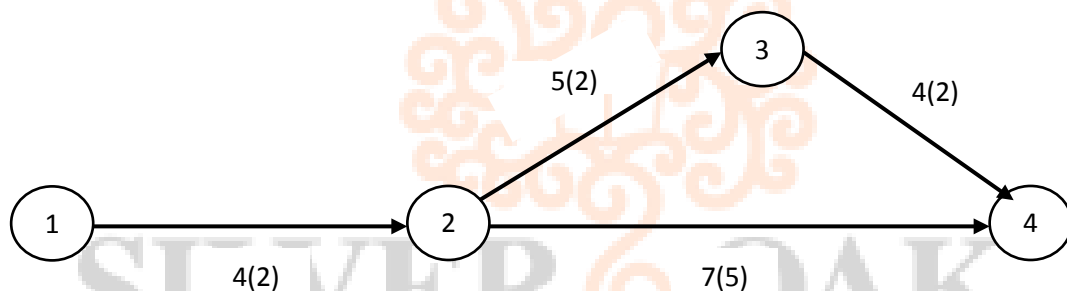
Probability corresponding to Z value may be interpolated from following table.

Value of Z	0.00	0.40	0.50	0.60
Probability	0.50	0.69	0.72	0.75

25) Table below gives the data about durations and costs of various activities of the network shown in figure.

Activity	Normal duration (weeks)	Normal cost (Rs.)	Crash duration (weeks)	Crash cost (Rs.)
1-2	4	4,000	2	12,000
2-3	5	3,000	2	7,500
2-4	7	3,600	5	6,000
3-4	4	5,000	2	10,000

The project overhead costs are Rs. 2000 per week. Find the optimum duration and cost associated with it. Also the cost optimization curve for the network.



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Activity/Task 4: Prepare A4 Chart and write about History of CPM and PERT with Pictures

A/Prof. Aakash B Desai
Subject Co-ordinator

Lect. Madhav Bhatt
Subject Partner

Assignment No. 5: Construction Equipment &Material management

- 1) What is the use of sensitivity analysis? Illustrate the different forms of sensitivity analysis with help of example.
- 2) Explain breakeven analysis, giving example.
- 3) Discuss factors affecting the ownership cost and operating cost of equipment.
- 4) Describe the importance of inventory management.
- 5) Discuss the role of vendor management in material management?
- 6) What are the inventory related costs? What are the functions of inventories?
- 7) Write a short note on following:
 - a) ABC Analysis
 - b) VED Analysis
 - c) FSN Analysis
- 8) What are the inventory models needed? Discuss EOQ model.
- 9) What do you understand by Job Layout? What are the factors affecting the job layout?

Activity/Task 5: Prepare the job layout for Silver Oak College considering it as under construction site (Use Chart Paper)

A/Prof. Aakash B Desai
Subject Co-ordinator

Lect. Madhav Bhatt
Subject Partner

Assignment No. 6: Construction Account and Value Management

- 1) What is accounting? Highlight its principles and limitations.
- 2) Draw a flow chart of accounting process.
- 3) Write a short note on construction contract revenue recognition.
- 4) Explain balance sheet and working capital.
- 5) Discuss various steps involved in value engineering.
- 6) Why is cost code important?
- 7) Study the cost statement for any significant project under construction in Ahmedabad.
- 8) What is value engineering? At which stage is gives maximum advantage.

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**Activity/Task 6: Attach Printed Specimen copy of Balance Sheet &
Cost Statement**

A/Prof. Aakash B Desai
Subject Co-ordinator

Lect. Madhav Bhatt
Subject Partner

Assignment No. 7: Construction Quality & Safety Management

- 1) Write a short note on Quality Control. Highlight its approaches.
- 2) Discuss inspection, quality control and quality assurance in a construction project.
- 3) Discuss Juran's quality trilogy and steps suggested for quality improvement.
- 4) What do you mean by total quality management?
- 5) Discuss the contribution of Deming, Juran and Crosby in the field of quality management.
- 6) Write a short note on following:
 - a) Audit Cycle
 - b) CONQUAS
- 7) Define Safety and explain its importance in construction project.
- 8) Explain theory of 'Causes of Accident'
- 9) Write about Heinrich's Domino theory.
- 10) Explain safety and health management system.

Activity/Task 7: Prepare a Chart describing Safety Instruments needed at Construction Site using pictures.

A/Prof. Aakash B Desai
Subject Co-ordinator

Lect. Madhav Bhatt
Subject Partner

Assignment No. 8: Linear Programming & Factors for Success of Project

- 1) Explain graphical method for linear programming.
- 2) Explain simplex method as solution for linear programming.
- 3) Explain following terms:
 - a) Slack variable
 - b) Basic variable
 - c) Non basic variable
- 4) Define success of project. What are the parameters considered for success of a project?
- 5) List out project performance attributes for success of a project.
- 6) List out the project failure attributes.

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Activity/Task 8: Attach News Paper Article discussing about Current Infrastructure Trends and Future Ahead.

Refer: Times of India (Sunday Column) etc.

A/Prof. Aakash B Desai

Lect. Madhav Bhatt

Subject Co-ordinator

Subject Partner